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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/554,250 | 07/05/2006 | Ferdinand Mannle | 061778.002 | 2992 |
| 7590 James E Bradley Bracewell & Giuliani PO Box 61389 Houston, TX 77208-1389 | | | EXAMINER MULCAHY, PETER D | |
| | | | ART UNIT 1762 | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/554,250

Applicant(s)

MANNLE ET AL.

Examiner

Peter D. Mulcahy

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Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 12-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsman's Patent Drawing Review (PTO-940)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-10 and 26 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for iron, cerium and potassium as the metal species, does not reasonably provide enablement for all metal species. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims. The specification describes the mechanism for the formation of the iron compound at page 10 and exemplifies the preparation of the compounds using cerium and potassium. Given the known differences between the relative reactivity of chemically divergent metal compounds the specification fails to provide sufficient enablement for all metal species as claimed. There is no reason to understand that all metals will function in the method as claimed. Specifically, the Chatterjee et al. patent 5,135,966 states that all transition metal stearates do not cause photodegradation. Column 2 lines 35-40 state that copper stearate enhances photostability of some polyolefins.
3. Claims 1, 4-11 and 26 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for an aqueous hydrogen peroxide solution and/or organic peroxides as the "oxidizing agent," does not

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reasonably provide enablement for the scope of "oxidizing agent" or air as a species of oxidizing agent. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make or use the invention commensurate in scope with these claims. The specification provides no support, beyond mere mention, of the scope of the "oxidizing agent" as claimed. . Given the known differences between the relative reactivity of chemically divergent "oxidizing agents", the specification fails to provide sufficient enablement for all species as claimed. There is no reason to understand that any specie that will oxidize will function in the method as claimed.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 3, 4, 5, 6, 8, 11, and 26 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over

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Boberg US 3,865,767 or Chapman et al. US 5,352,716 each taken alone and in the alternative.

7. The rejection over Boberg as set forth in the action mailed 3/18/10 is essentially repeated. The claims are considered anticipated and/or obvious from this disclosure for the following reasons. The claim limitation "presence of an oxidizing agent" is anticipated when the peroxides or hydroperoxides are formed and the metal salt reacts with the fatty acid ligand, see column 4 line 7 and 60+. The Fe^{3+} is the highest oxidation state and is ensured by the reaction of the metal with the fatty acid in the presence of hydroperoxide, see column 5 line 31. This is an anticipatory disclosure with respect to claims 1, 3, 8 and 11. The fact that the patent does not state that the function of the hydroperoxide is to ensure the oxidation state of the metal is not germane to the patentability of the claims. The claim limitation is a mental step and/or a necessary result of the disclosure.
8. Claim 4 is anticipated when air is present at the surface or interface of the polymer/reactants.
9. The chloride is a preferred species of "X" ligand and is not precluded by the OH as alleged. The peroxides are present when the chloride is used given that they are present within the polymer, column 4 line 6. As such claim 5 is anticipated.
10. The Chapman patent is consistent with Boberg. The metal salts and fatty acids are reacted so as to decompose the polymeric product, see column 5 lines 58+. The oxidation state of the metal is discussed at column 7 lines 5+. The

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oxidants are further discussed at column 6 lines 43+. In view of this disclosure the claims are not novel.

11. Claims 1, 4, 5, 6, 8, 11 and 26 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hwu et al. US 5,434,277 or Yoshizawa et al. US 5,175,322.

12. The rejection set forth over Hwu is maintained.

13. The Yoshizawa et al. patent shows the reaction of metal salts and fatty acids, see the examples at column 8 lines 4-38. The presence of the oxidizing agent is anticipated by the hydroxides and the air present at the interface of the reaction solution and the free space in the reaction vessel. Note, there is no purging step. Further, the rotating impellers would create agitation at the surface and bring air into the reaction solution as well. This is seen to be an anticipatory example.

Response to Arguments

14. Applicant's arguments filed 11/18/11 have been fully considered but they are not persuasive. With respect to Hwu and Boberg applicants argue that "the references fail to disclose an additive for providing controllable degradation of thermoplastics." This is not persuasive. The claims are not limited by the intended use of the "additive". Further, the claimed "additive" is simply ferric stearate. Applicant's claims are directed to a method of producing the ferric stearate using an "oxidizing agent".

15. It is then alleged that Hwu does not remedy the deficiencies of Boberg. This indicates that applicant does not understand the rejections set forth in the

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previous office action. The rejection is over either Hwu or Boberg each in the alternative.

16. Applicant then argues that Boberg does not teach that the hydroperoxides are present so as to ensure the highest oxidation state of the salt. This is not persuasive. The art need not use the same components for the claimed purpose. The oxidizing agents as claimed are present. This meets the claimed limitation. Further, the iron compounds are in the highest oxidation state. As such, the claims are anticipated.

17. Applicant then argues that Hwu does not incorporate the oxidizing agents as claimed. This is not persuasive. The Hwu teaches the formation of ferric stearate. This compound is the iron in its highest oxidation state. The reaction takes place in the presence of air at the interface and the hydroxy compounds. This is both the preferred species of oxidizing agent (air) and reads on the generically claimed "agent". Applicant has failed to support the allegation the hydroxy compounds do not meet the generically claimed "oxidizing agent".

Allowable Subject Matter

18. An independent claim directed to the limitations of claims 1, 2, 7 and 11 would be considered allowable over the art of record.

19. The additional art is cited of interest.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter D. Mulcahy whose telephone number is 571-272-1107. The examiner can normally be reached on Mon.-Fri. 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Peter D. Mulcahy/
Primary Examiner, Art Unit 1762